Claims

1-11. (canceled)

12. (currently amended) A method for identifying an agent that ~~modulates~~ inhibits T lymphocyte differentiation and/or modulates B cell development, the method comprising: (a) assaying a cellular activity of an inositol 1,4,5-trisphosphate 3-kinase B (IP3KB) or a ~~fragment~~ functional derivative thereof having at least 90 % sequence identity with a sequence encoding IP3KB, in the presence of a test agent to identify one or more modulating agents that ~~modulate~~ inhibit the cellular activity of the IP3KB; and (b) testing one or more of the modulating agents for ability to ~~modulate~~ inhibit T lymphocyte development or function and/or modulate B cell development; thereby identifying an agent that modulates inhibits T lymphocyte differentiation and/or modulates B cell development.

13. (canceled)

14. (currently amended) The method of claim 12, wherein ~~the~~ one or more modulating agents identified in step (a) inhibit kinase activity of the IP3KB.

15. (previously presented) The method of claim 14, wherein the kinase activity is to catalyze conversion of inositol 1,4,5-triphosphate (IP3) to inositol 1,3,4,5-tetrakisphosphate (IP4).

16. (previously presented) The method of claim 12, wherein the modulating agents are tested for ability to inhibit $CD4^+$ $CD8^+$ T cell development into $CD4^+$ or $CD8^+$ T cells.

17. (withdrawn) A method for suppressing an undesired T lymphocyte response in a subject, the method comprising administering to the subject an effective amount of an agent that inhibits a cellular activity of an IP3K; thereby suppressing T lymphocyte response in the subject.

18. (withdrawn) The method of claim 17, wherein the IP3K is an IP3KB.

19. (withdrawn) The method of claim 17, wherein the agent inhibits kinase activity of the IP3K.

20. (withdrawn) The method of claim 17, wherein the agent decreases cellular levels of the IP3K.

21. (withdrawn) The method of claim 17, wherein the subject suffers from an autoimmune disease or graft rejection.

22. (withdrawn) The method of claim 21, wherein the autoimmune disease is systemic lupus erythematosus (SLE), rheumatoid arthritis (RA), or multiple sclerosis (MS).

23. (withdrawn) A method for modulating T lymphocyte differentiation in a subject, the method comprising (a) screening test compounds to identify a modulating agent that modulates a cellular activity of an IP3K, and (b) administering to the subject a pharmaceutical composition comprising an effective amount of the modulating agent; thereby modulating T lymphocyte differentiation in the subject.

24. (withdrawn) The method of claim 23, wherein the IP3K is an IP3KB.

25. (withdrawn) The method of claim 23, wherein the modulating agent inhibits kinase activity of the IP3K.

26. (withdrawn) The method of claim 25, wherein the subject suffers from an autoimmune disease or graft rejection.

27. (withdrawn) The method of claim 23, wherein the subject suffers from inflammation, graft versus host disease, psoriasis, or allergy.

28. (new) The method of claim 12, wherein the IP3KB has an amino acid sequence of Accession No. CAB65055, Accession No. CAC40660, Accession No. NP_002212 or SEQ ID NO: 1, or a sequence having at least 90 % sequence identity with ~~that is substantially identical to~~ any of these sequences.

29. (new) The method of claim 12, wherein the IP3KB is encoded by a polynucleotide having a nucleotide sequence of SEQ ID NO: 2, 3, or 4, or a sequence having at least 90 % sequence identity with ~~that is substantially identical to~~ any of these sequences.

30. (new) The method of claim 12, wherein one or more modulating agents identified in step (a) decrease cellular levels of IP3KB in a cell.

31. (new) The method of claim 30, wherein the cell is selected from the group consisting of thymus cell, $CD4^+$ $CD8^+$ T cell, $CD4^+$ T cell, $CD8^+$ T cell, and NK cell.

32. (new) The method of claim 30, wherein one or more modulating agents identified in step (a) inhibit the expression of a gene encoding IP3KB.

33. (new) The method of claim 12, wherein said agent inhibits T cell lymphocyte differentiation.

34. (new) The method of claim 12, wherein said agent inhibits B cell development.

35. (new) The method of claim 34, wherein said agent decreases IgM+Ig+ transitional type 2 cells.

36. (new) The method of claim 12, further comprising administering said agent to a subject suffering from an autoimmune disease or graft rejection.

37. (new) The method of claim 36, wherein the autoimmune disease is systemic lupus erythematosus (SLE), rheumatoid arthritis (RA), or multiple sclerosis (MS).

38. (new) The method of claim 12, further comprising administering said agent to a subject suffering from inflammation, graft versus host disease, psoriasis or allergy.